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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,475	02/20/2004	Kuo-Tong Ma	B-5376 621715-0	7459

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EXAMINER

UHLENHAKE, JASON S

ART UNIT PAPER NUMBER

2853

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/783,475	<b>Applicant(s)</b> MA ET AL.	
	<b>Examiner</b> Jason Uhlenhake	<b>Art Unit</b> 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/25/2006</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 6, 10, 12, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Hobson et al (U.S. Pat. 6,199,979).

#### ***Hobson et al discloses:***

- ***regarding claim 1***, method for filling an ink into an ink cartridge comprising: treating a filter with a surfactant to increase the hydrophilicity of the filter, wherein the filter has pores (Column 8, Lines 1 – 10)
- installing the treated filter in an ink cartridge (Column 3, Lines 13-15; Column 3, Lines 30-31); filling an ink into the ink cartridge to pass through the treated filter (Column 3, Lines 13-35; Column 5, Lines 13-16)
- ***regarding claim 3 and claim 12***, wherein the filter is a fiber filter, nylon filter, foamed filter or metal filter (Column 9, Lines 1 – 15)
- ***regarding claim 6 and claim 15***, wherein the surfactant is used singly (Column 8, Lines 1 – 10)
- ***regarding claim 10***, method for filling an ink into an ink cartridge comprising: installing a filter in an ink cartridge, wherein the filter has pores (Column 3, Lines 13 – 35; Column 5, Lines 13-16)

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- treating the filter with a surfactant to increase the hydrophilicity of the filter  
(Column 8, Lines 1 – 10)
- filling an ink into the ink cartridge to pass through the treated filter (Column 3, Lines 13 – 24; Column 5, Lines 13-16)

Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by Hirose et al (U.S. Pat. 6,120,140).

***Hirose et al discloses:***

- ***regarding claim 19***, method for filling an ink into an ink cartridge comprising: providing an ink cartridge having an ink passage, wherein the ink passage has a wall (Column 11, Lines 28 – 45)
  - treating the wall of the ink passage with a surfactant to increase the hydrophilicity of the wall of the ink passage (Column 11, Lines 28 – 45)
  - filling an ink into the ink cartridge to pass through the treated ink passage (Figure 11; Abstract; Column 8, Lines 2 – 4)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hobson et al (U.S. Pat. 6,199,979) in view of Kitahara (U.S. Pat. 6,190,009).

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***Hobson et al discloses all of the claimed limitations except for the following:***

- ***regarding claim 2 and claim 11***, wherein when the ink is filled into the ink cartridge, the pore of the filter and the ink surface are at an angle less than 90 degrees

***Kitahara discloses:***

- ***regarding claim 2 and claim 11***, wherein when the ink is filled into the ink cartridge, the pore of the filter and the ink surface are at an angle less than 90 degrees (Column 2, Lines 66 – 67; Column 3, Lines 1 – 10)

At the time the invention was made it, would have been obvious to a person of ordinary skill in the art to incorporate the teaching of ink is filled into the ink cartridge, the pore of the filter and the ink surface are at an angle less than 90 degrees as taught by Kitahara into the device of Hobson et al, for the purpose of supplying an adequate volume of ink to a recording head for printing.

Claims 4, 5, 13, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hobson et al (U.S. Pat. 6,199,979) in view of Engel et al (U.S. Pat. 6,926,957).

***Hobson et al discloses all of the claimed limitations except for the following:***

- ***regarding claims 4, 13***, wherein the surfactant has an HLB value of 3 to 18
- ***regarding claims 5, 14***, wherein the surfactant has an HLB value of 6 to 15

***Engel et al discloses the following:***

- ***regarding claims 4, 13***, wherein the surfactant has an HLB value of 3 to 18 (Column 7, Lines 19 – 23)

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- **regarding claims 5, 14**, wherein the surfactant has an HLB value of 6 to 15  
(Column 7, Lines 19 – 23)

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of surfactant has an HLB value of 3 to 18 ; surfactant has an HLB value of 6 to 15 as taught by Engel et al into the device of Hobson et al. The motivation for doing so would have been to improve the coatability of the film.

Claims 7, 8, 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hobson et al (U.S. Pat. 6,199,979) in view of Hayashi et al (U.S. Pub 2001/0035897).

***Hobson et al discloses all of the claimed limitations except for the following:***

- **regarding claim 7 and claim 16**, wherein the surfactant is dissolved in a solvent when used
- **regarding claim 8 and claim 17**, wherein the solvent is water or a hydrophilic solvent

***Hayashi et al discloses the following:***

- **regarding claim 7 and claim 16**, wherein the surfactant is dissolved in a solvent when used (Paragraph 0290)
- **regarding claim 8 and claim 17**, wherein the solvent is water or a hydrophilic solvent (Paragraph 0290)

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At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of surfactant is dissolved in a solvent when used; the solvent is water or a hydrophilic solvent as taught by Hayashi et al into the device of Hobson et al. The motivation for doing so would have been to effect the movement of ink smoothly within a liquid flow path.

Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hobson et al (U.S. Pat. 6,199,979) as modified by Hayashi et al (U.S. Pub 2001/0035897) as applied to claim 1 above, and further in view of Reem et al (U.S. Pub. 2004/0094065)

***Hobson et al as modified by Hayashi et al discloses all of the claimed limitations except for the following:***

- ***regarding claim 9 and claim 18***, wherein the surfactant is present in an amount of 0.0001 to 10 weight %

***Reem et al discloses the following:***

- ***regarding claim 9 and claim 18***, wherein the surfactant is present in an amount of 0.0001 to 10 weight % (Paragraph 0053)

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of the surfactant is present in an amount of 0.0001 to 10 weight % as taught by Reem et al into the device of Hobson et al as modified by Hayashi et al. The motivation for doing so would have been to reduce the gloss value of the printed image.

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Claims 20, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose et al (U.S. Pat. 6,120,140) in view of Engel et al (U.S. Pat. 6,926,957).

***Hirose et al discloses all of the claimed limitations except for the following:***

- ***regarding claims 20***, wherein the surfactant has an HLB value of 3 to 18
- ***regarding claims 21***, wherein the surfactant has an HLB value of 6 to 15

***Engel et al discloses the following:***

- ***regarding claims 20***, wherein the surfactant has an HLB value of 3 to 18  
(Column 7, Lines 19 – 23)
- ***regarding claims 21***, wherein the surfactant has an HLB value of 6 to 15  
(Column 7, Lines 19 – 23)

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of surfactant has an HLB value of 3 to 18 ; surfactant has an HLB value of 6 to 15 as taught by Engel et al into the device of Hirose et al. The motivation for doing so would have been to improve the coatability of the film.

Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hobson et al (U.S. Pat. 6,199,979) in view of Askren et al (U.S. Pat. 6,481,837)

***Hobson et al discloses all the claimed limitations except for the following:***

- ***regarding claims 22, 23***, step of filling ink into the ink cartridge includes passing ink through the treated filter as the ink cartridge fills with ink

***Askren et al discloses:***



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- **regarding claims 22, 23**, step of filling ink into the ink cartridge (12) includes passing ink through the treated filter (52) as the ink cartridge (12) fills with ink (Figures 1-4; Column 4, Lines 43-49), for the purpose of removing air from an ink delivery system in an ink jet printer

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Askren into the device of Hobson et al, for the purpose of removing air from an ink delivery system in an ink jet printer

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose et al (U.S. Pat. 6,120,140).in view of Askren et al (U.S. Pat. 6,481,837)

***Hirose et al discloses all the claimed limitations except for the following:***

- **regarding claim 24**, step of filling ink into the ink cartridge includes passing ink through the treated filter as the ink cartridge fills with ink

***Askren et al discloses:***

- **regarding claim 24**, step of filling ink into the ink cartridge (12) includes passing ink through the treated filter (52) as the ink cartridge (12) fills with ink (Figures 1-4; Column 4, Lines 43-49), for the purpose of removing air from an ink delivery system in an ink jet printer

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Askren into the device of Hirose et al, for the purpose of removing air from an ink delivery system in an ink jet printer

***Response to Arguments***

Applicant's arguments filed 7/18/2006 have been fully considered but they are not persuasive.

Applicant argues that Hobson does not disclose "installing the treated filter in an ink cartridge" and "filling an ink into the ink cartridge to pass through the treated filter. However, Hobson clearly discloses a filter (8) that can be adhered or attached to an ink printer cartridge (Column 3, Lines 13-15; Column 3, Lines 30-31). Hobson also discloses an ink printer cartridge containing ink (cartridge filled with ink) comprising an ink filter for removing contaminants and/or agglomerates from ink within the ink printer cartridge (ink passing through the treated filter) (Figure 1; Column 3, Lines 13-24; Column 5, Lines 13-16)

Applicant argues that Hirosawa does not disclose "providing an ink cartridge having an ink passage, wherein the ink passage has a wall"; "treating the wall of the ink passage with a surfactant to increase the hydrophilicity of the wall of the ink passage"; and "filling an ink into the ink cartridge to pass through the treated the ink passage". However, Hirosawa discloses an ink flow passage (44, 47b of Figure 11) (a passage must have walls) and surfactant that is mixed into the ink. The ink cartridge (41) is designated as the ink-storing portion, for the ink cartridge to store ink it must be filled with ink first. The cartridge (41) is filled with ink and then the ink can pass through the ink passage, the flowing ink will treat the walls with the surfactant that is mixed into the ink. The claim only states that the wall are treated with a surfactant and does not state the degree of treatment the walls receive (surfactant mixed with ink), and nothing says that the walls are treated with surfactant before initial use of the ink flow passage. Also

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claim 19 states, "wherein the ink passage has a wall treating the wall of the ink passage", it is not clear to the examiner what is meant by "a wall treating the wall".

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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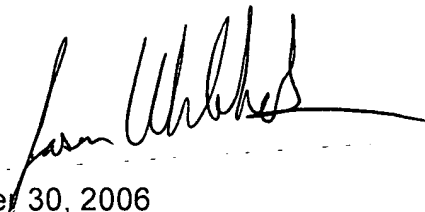
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Uhlenhake whose telephone number is (571) 272-5916. The examiner can normally be reached on Monday - Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JSU

September 30, 2006



**STEPHEN MEIER**  
**SUPERVISORY PATENT EXAMINER**